

Appl. No. 09/848,520
Atty. Docket No. 8070ML\$
Amdt. dated June 1, 2006
Reply to Office Action of February 1, 2006
Customer No. 27752

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A simulation process for analyzing a manufacturing system, comprising the following steps:
collecting data from a first manufacturing system, wherein said first system has a plurality of failure modes and said data relate to said failure modes, said data including one or more at least one false start events event having a zero uptime;
analyzing said first system to determine said failure modes;
calculating an uptime for each said failure mode;
parameterizing said data for use with a computer program simulating a second system; and
executing said computer program simulating said second system, wherein said executing step comprises the steps of determining whether said second system will encounter a first false start event based upon said data collected from said first system.
2. (Original) The process of claim 1, wherein said first system and said second system are the same.
3. (Canceled)
4. (Canceled)
5. (Previously presented) The process of claim 3, wherein said executing step comprises the step of calculating a zero uptime for at least one said failure mode.

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6. (Original) The process of claim 5, wherein said executing step further comprises the step of determining which of said failure modes causes a first loss event for said second system.
7. (Original) The process of claim 6, wherein said executing step further comprises the step of calculating a downtime for said failure mode which causes said first loss event for said second system.
8. (Canceled)
9. (Previously presented) The process of claim 3, wherein said failure modes include a plurality of cumulative cause failure modes and a plurality of competing cause failure modes.
10. (Original) The process of claim 9, wherein said executing step further comprises the steps of:
calculating a first uptime for each cumulative cause failure mode;
calculating a first uptime for each competing cause failure mode;
determining which of said cumulative cause failure modes and competing cause failure modes causes said first loss event of said second system by selecting the smallest value of said first uptimes; and

calculating a downtime for said failure mode which causes said first loss event of said second system.
11. (Original) The process of claim 9, wherein said executing step further comprises the step of:
if said failure mode which causes said first loss event of said second system is a cumulative cause failure mode, then calculating a second uptime for only said cumulative cause failure mode which causes said first loss event for said

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second system and calculating a second uptime for each of said competing cause failure modes.

12. (Original) The process of claim 1, wherein said executing step further comprises the steps of:
if there is a first false start loss event, then calculating a downtime for said first false start loss event; and
determining whether said second system will encounter a second false start loss event following said downtime for said first false start loss event.
13. (Original) The process of claim 1, wherein said executing step further comprises the step of outputting a reliability value for said second system.
14. (Canceled)
15. (Original) The process of claim 13, wherein the error of said reliability value is less than about three percent.
16. (Canceled)
17. (Currently Amended) A computerized simulation process for analyzing a manufacturing system, comprising the following steps:
collecting data from a first manufacturing system, wherein said first system has a plurality of failure modes, each said failure mode having an uptime associated therewith, and said data relate to said failure modes, said data including at least one false start event having a zero uptime;
using said data to calculate a plurality of parameters, said parameters simulating said first system; and
using said simulation of said first system to determine whether a second system will encounter a false start event based upon said data collected from said first system.

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18. (Currently Amended) A The process according to Claim 17 which is carried out by a program product comprising a signal bearing medium embodying a program of machine-readable instructions executable by a digital processing apparatus to perform the steps of claim 17.
19. (Currently Amended) The program product process of claim 18, wherein said signal bearing medium is an optical disk or a magnetic disk.
20. (Currently Amended) The program product process of claim 18, wherein said signal bearing medium is at least a portion of a computer network.
21. (Currently Amended) The program product process of claim 18, wherein said signal bearing medium is a carrier wave.
22. (Original) An article of manufacture, comprising:
at least one computer; and
a program product comprising a signal bearing medium embodying a program of machine-readable instructions executable by a digital processing apparatus to perform the steps of claim 17.
23. (Currently Amended) A system for manufacturing one or more products, said system comprising a collector for collecting data, a data collection, wherein said data relate to events collected from said system and including include at least one false start events event having zero uptime, and
a recorder for recording said collected data, including data relating to one or more false start events having zero uptime.
24. (Currently Amended) A system according to claim 23, wherein said collector for collecting said data collects false start events having a zero uptime comprise an attempt to restart said manufacturing system wherein said

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manufacturing system consumes at least one of time and material, but does not perform its intended function of producing a product according to specifications.

25. (Previously Presented) A system according to claim 24, further comprising a time stamp and date stamp for each data event collected by said system.